

Acid Fast Bacillus (AFB) Susceptibility Studies

Administering Department: Microbiology

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Purpose of Test:

To evaluate the susceptibility of clinical isolates of *Mycobacterium tuberculosis* to the first-line TB drugs rifampin, ethambutol, isoniazid (INH) and pyrazinamide (PZA).

Sample and Submission Guidelines:

Preferred Specimen: Isolated *Mycobacterium sp.* culture

Other Acceptable Specimens:

- Respiratory Aspirate
- Bronchial Lavage Fluid
- Body Fluids
- CSF
- Tissue

Required Specimen Volume: 5 mls sputum, aspirate or CSF; or 50 mls body fluid

Minimum Specimen Volume: >2 mls sputum, aspirates, or CSF; or >20 mls body fluid

Specimen Container: Sterile container with screw-cap

Specimen Identification: Label container with patient's first and last name, include date and time of collection.

Special Instructions:

- First morning sputum is recommended.
- Indicate specimen source on requisition.
- Include clinical diagnosis or relevant patient history on requisition.

Shipping Requirements: Store and ship at refrigerated temperature 2-8° C. Transport to lab as soon as possible.

Sample Rejection Criteria:

- Inappropriate specimen transport
- Inadequate sputum sample (not enough neutrophils present and/or too many squamous cells present which is indicative of saliva).
- Organism does not grow on test media
- Mislabeled/Unlabeled sample
- Sample > 72 hours old

Method: Culture

Possible Results and Meaning:

For Rifampin, Ethambutol and Isoniazid:

Susceptible= "Isolate shows 0% resistance to < drug> at <concentration> by ESP"

Resistant= "Isolate shows resistance to <drug> and <concentration> by ESP"

For Pyrazinamide:

See memo at bottom of report

Charge for test: Currently, there is no charge for TB services at the Bureau of Laboratories

Turn-Around-Time: Up to 28 Days for Susceptibility Testing